

**ecology and environment, inc.**

Global Environmental Specialists


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**MEMORANDUM**

DATE: August 8, 2012

TO: Jeff Fetters, START-3 Project Manager, E & E, Seattle, WA

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington 

SUBJ: **Organic Data Quality Assurance Review,  
Fourth Avenue and Gamble Parking Lot Site, Anchorage, Alaska**

REF: TDD: 12-01-0004 PAN: 002233.0757.01SI

The data quality assurance review of one water sample collected from the Fourth Avenue and Gamble Parking Lot site located in Anchorage, Alaska, has been completed. Analysis for Diesel Range Organics (DRO) and Residual Range Organics (RRO) (ADEC Methods AK-102 and AK-103) was performed by Test America, Inc., Tacoma, Washington. All sample analyses were evaluated following EPA's Stage 2 and/or 4 Data Validation Electronic/Manual Process (S2VEM and/or S4VEM).

The sample was numbered: JRZ87

**Data Qualifications:****1. Sample Holding Times: Acceptable.**

The sample was maintained at  $< 6^{\circ}\text{C}$ . The sample was collected on July 17, 2012, extracted on July 23, 2012, and analyzed on July 25, 2012, therefore meeting QC criteria of less than 7 days between collection and extraction for water samples, and less than 40 days between extraction and analysis.

**2. Initial Calibration: Acceptable.**

Calculations were verified as correct. All correlation coefficients were within QC limits.

**3. Continuing Calibration: Acceptable.**

Calculations were verified as correct. All percent differences (%Ds) were within laboratory control limits.

**4. Error Determination: Not Performed.**

Samples necessary for bias and precision determination were not provided to the laboratory. All samples were flagged RND (Recovery Not Determined) and PND (Precision Not Determined), although the flags are not found on the Form I's.

**USEPA SF****1409863**

**5. Blanks: Acceptable.**

A method blank was analyzed for each extraction batch for each matrix and analysis system. Diesel range organics were not detected in any blank.

**6. System Monitoring Compounds (SMC): Acceptable.**

All recoveries of the SMCs were greater than 10% and within QC criteria.

**7. Performance Evaluation Samples: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

**8. Blank Spikes: Acceptable.**

Blank spike results were within QC limits.

**9. Duplicates: Acceptable.**

Spike duplicate results were acceptable.

**10. Quantitation and Quantitation Limits: Acceptable.**

Sample concentrations were correctly calculated.

**11. Laboratory Contact: Not Required.**

No laboratory contact was required.

**12. Overall Assessment of Data for Use**

According to the laboratory, the DRO-range results in sample JRZ87 most closely resemble a complex mixture of heavily weathered/degraded diesel fuel and/or a mineral/transformer oil range product. Based on this, the positive DRO and RRO results in sample JRZ87 were qualified as estimated quantities with a high bias (JH).

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Directive "Quality Assurance/Quality Control Guidance for Removal Activities, Data Validation Procedures" (EPA/540/G-90/004) and the analytical method. Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

### Data Qualifiers and Definitions

- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.
- JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.
- JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.
- JQ - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).
- N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

# Analytical Data

Client: Ecology and Environment, Inc.

Job Number: 580-34058-1

Client Sample ID: JRZ87

Lab Sample ID: 580-34058-1

Date Sampled: 07/17/2012 0903

Client Matrix: Water

Date Received: 07/19/2012 0940

## AK102 & 103 Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analysis Method:	AK102 & 103	Analysis Batch:	580-116101	Instrument ID:	TAC017
Prep Method:	3520C	Prep Batch:	580-115900	Lab File ID:	ZZ21285.D
Dilution:	2.0			Initial Weight/Volume:	1000 mL
Analysis Date:	07/25/2012 2046	Run Type:	DL	Final Weight/Volume:	1 mL
Prep Date:	07/23/2012 1440			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
DRO (nC10-<nC25)	18 JH	Xmw	0.044	0.20

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	105		50 - 150

*[Handwritten signature]*

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Client Matrix: Water

Date Received: 07/19/2012 0940

## AK102 & 103 Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analysis Method:	AK102 & 103	Analysis Batch:	580-116101	Instrument ID:	TAC017
Prep Method:	3520C	Prep Batch:	580-115900	Lab File ID:	ZZ21283.D
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Analysis Date:	07/25/2012 2025			Final Weight/Volume:	1 mL
Prep Date:	07/23/2012 1440			Injection Volume:	1 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
RRO (nC25-nC36)	0.44	JH	0.027	0.10

Surrogate	%Rec	Qualifier	Acceptance Limits
n-Triacontane-d62	93		50 - 150

*Musgr*